UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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KEYSIGHT TECHNOLOGIES, INC.,

Petitioner,

V.

CENTRIPETAL NETWORKS, INC.,

Patent Owner.

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IPR2023-00448

Patent 11,012,474

_____

CORRECTED TRANSCRIPT OF

DEPOSITION OF:

MICHAEL GOODRICH, PH.D.

TUESDAY, JANUARY 16, 2024

9:00 A.M.

Reported by:

GINA M. CLOUD, CSR No. 6315

JOB No. 6411820

PAGES 1 - 90

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Calendar-CA@veritext.com 866-299-5127

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KEYSIGHT TECHNOLOGIES, INC.,

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IPR2023-00445

Patent 10,785,266

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DEPOSITION OF:

MICHAEL GOODRICH, PH.D.

TUESDAY, JANUARY 16, 2024

Veritext Legal Solutions
Calendar-CA@veritext.com 866-299-5127

Deposition of MICHAEL GOODRICH, PH.D., the witness, taken on behalf of the Petitioner, on Tuesday, January 16, 2024, 9:00 A.M., via Virtual Zoom, pursuant to NOTICE.

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I N D E X

WITNESS

MICHAEL GOODRICH, PH.D.

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EXHIBITS

NUMBER	DESCRIPTION	PAGE
Exhibit 4	United States Patent No. US 10,785,266 B2, Rogers et al., dated September 22, 2020, 30 pages	63
Exhibit 5	United States Patent No. US 11,012,474 B2, Rogers et al., dated May 18, 2021, 37 pages	71
Exhibit 1005	United States Patent No. US 2011/0072506 A1, Law et al., dated March 24, 2011, 43 pages	8
Exhibit 2002	Declaration of Dr. Michael T. Goodrich in Support of Patent Owner's Response for U.S. Patent 10,785,266, 83 pages	10
Exhibit 2012	Declaration of Dr. Michael T. Goodrich in Support of Patent Owner's Response for U.S. Patent 11,012,474, 101 pages	10

Laguna Niguel, California, Tuesday, January 16, 2024

9:00 a.m.

MICHAEL GOODRICH, PH.D.,

having been first duly sworn, was

examined and testified as follows:

EXAMINATION

BY MR. DETRIXHE:

Q. Good morning, Dr. Goodrich. 09:02:44

Could you please state your full name for the record.

A. Michael Truman Goodrich.

Q. I would like to begin by going over some ground rules. Just now you've taken an oath to 09:02:54 testify truthfully and although we're remote in this deposition, that oath has the same force and effect as if you were in a court of law.

Do you understand?

A. Yes. 09:03:06

Q. We'll be having a conversation. I'll be asking you questions. Your job is to answer them, defense counsel may state an objection, but you are still required to answer the question. The only exception is if counsel specifically instructs you 09:03:19

not to answer a question.

Do you understand?

A. Yes.

Q. Also it's very important for both of us not to talk over each other because the court reporter is 09:03:28 trying to write down everything that everyone says today and it is difficult to type when two people are talking at the same time.

Fair enough?

A. I'll do my best. 09:03:41

Q. I will as well, thank you.

Also it's important to respond audibly to each question so that your answer may be written down, as opposed to just nodding your head.

Is that okay? 09:03:57

A. Yes.

Q. Any reason why you cannot give your best testimony today?

A. No.

Q. Did you meet with anyone to prepare for your 09:04:08 deposition today?

A. Yes.

Q. Who did you meet with?

A. I met on Zoom with Jeff Price and Jenna Fuller yesterday. 09:04:18

Q. Was anyone else present?
A. No.
Q. How long was your meeting yesterday?
A. Roughly three hours.
Q. Apart from that meeting, did you have any other meetings to prepare for your deposition today? 09:04:28
A. No.
Q. You submitted a declaration in connection with IPR proceeding number 2023-445 which relates to the '266 Patent, correct? 09:04:49
A. Yes.
Q. You also submitted a declaration in connection with IPR proceeding number 2023-448 which relates to the '474 Patent, correct?
A. Yes. 09:05:04
Q. What was your process for writing your declarations?
A. My process was to study the prior art references, study the patents, review the materials, including expert declarations that were submitted that now I am rebutting, perform an analysis, make suggestions with attorneys and then in cooperation with the attorneys, prepared my declarations. 09:05:21
Q. Did counsel send you an initial draft of your declarations? 09:05:47

A. There was some initial drafts that came from counsel, which I then edited and made it so that those declarations comprise my opinions in these matters.

Q. Approximately, how many hours did you spend editing your declaration relating to the '266 Patent? 09:06:04

A. I don't recall the time I spent on that and my billings were mixed with a number of matters for that client, so I believe it would be difficult to determine that. 09:06:21

Q. Same answer for your declaration regarding the '474 Patent?

A. Yes, that is correct.

Q. Ms. Anderson, could you please load into Exhibit Share what's previously been marked as Exhibit 1005, which I understand is the Law reference. 09:06:37

Mr. Goodrich, please let me know when you see it in Exhibit Share.

(The document referred to was marked as Exhibit 1005 for identification and is attached hereto.)

THE WITNESS: I have the Law reference in front of me.

BY MR. DETRIXHE: 09:07:46

Q. Could you please turn to paragraph 52 of Law.

A. I am there.

Q. I would like to direct your attention, it's a fairly long paragraph midway down sentence 09:08:07 beginning with "Each firewall 146." Let me know when you see that sentence.

A. I don't see that sentence. Could you remind me again where it is at?

Q. We're in paragraph -- actually sorry. I 09:08:52 meant to say paragraph 51, so right above it. There is a sentence beginning, "Each firewall 146 or device 134."

A. I see it, yes.

Q. I'll read the full sentence: "Each firewall 09:09:16 146 or device 134, 149, 152 may include a ruleset, for example, rulesets 147a, 148a, 147b, 148b, 151a, 151b, 153, defining the communication that may be received or processed by the UTMS-configured device."

Do you see that? 09:09:49

A. I do.

Q. And then the following sentence, skipping ahead a little bit, it refers to rulesets 147 and 158 that may include a global set of rules. Do you see that? 09:10:01

A. Not the way you said that.

Q. What do you see?

A. I see rulesets 147 and 151.

Q. Right. Okay. Fair enough.

Is it your understanding that ruleset 147 is 09:10:18
the ruleset implemented by firewall 146?

A. Could you please upload copies of my
declarations?

Q. Sure.

Ms. Anderson, please load into the Exhibit 09:10:34
Share Dr. Goodrich's declarations. There is one in
proceeding 445, that's Exhibit 2012. And then there
is another one in proceeding ending in -448 that is
Exhibit 2002. They both should have Goodrich doc in
the title of those exhibits. 09:11:02

(The document referred to was marked as
Exhibit 2012 for identification and is attached
hereto.)

(The document referred to was marked as
Exhibit 2002 for identification and is attached
hereto.)

BY MR. DETRIXHE:

Q. Let me know when you see them, Dr. Goodrich.

A. I just got the first one. Now I have the
second one. 09:12:21

Q. My question was: Would you agree that ruleset 147 referenced in paragraph 51 is the ruleset implemented by firewall 146 from paragraph 51?

MR. PRICE: Objection.

THE WITNESS: Could you please repeat the 09:17:47 question?

BY MR. DETRIXHE:

Q. I would like the record to reflect that several minutes have passed. It shouldn't be a difficult question. 09:17:54

The question is, is it your understanding that the ruleset 147 is the ruleset implemented by firewall 146?

MR. PRICE: Objection to the testifying on the record. 09:18:07

THE WITNESS: So to answer your question, the ruleset 146, 147 that is referenced here in paragraph 51, person of ordinary skill in the art would understand that this is referring to generically either the ruleset 147a or 147b, because 09:18:25 here in paragraph 51, it leads off with the reference to figure 1a and this discussion in the paragraph is still in the context of figure 1a.

And then when we go to figure 1a, we see that it does not have anything annotated simply as 09:18:56

147 or 146.

Instead it has a firewall 146a and a ruleset 147a that is coupled to it and likewise, it has a firewall 146b and ruleset 147b that is coupled to it.

So here in paragraph 51, when it is referring to rule sets 147 and 151, it's referring generically in this case for 147, to either ruleset 147a or 147b. 09:19:24

BY MR. DETRIXHE:

Q. Thank you, Dr. Goodrich. 09:19:45

Looking at figure 1a, you just mentioned that rulesets 147a and 147b are coupled to firewalls 146a and 146b respectively. So in this case, is it your understanding that firewalls 146a implements rule -- ruleset 147a and firewall 146b implements ruleset 147b? 09:20:18

A. Yes, that is correct.

Q. Scroll down to figure 3 which includes the same components 146a, 147a, 146b, 147b. Is it your same understanding that here, firewall 146a implements ruleset 147a and firewall 146b implements ruleset 147b? 09:20:52

A. Yes.

Q. Also back to paragraph 51, the Law describes what it calls a unified threat management system, 09:22:29

1 UTMS, and describes various UTMS-configured network
2 devices, e.g., firewalls 146a, 146b.
3 Do you see that description, Dr. Goodrich,
4 near the top of paragraph 51?
5 A. Yes, I do. 09:23:06
6 Q. Would you agree that Law is describing the
7 firewalls 146a and 146b as examples of
8 UTMS-configured network devices?
9 A. Yes.
10 Q. I would like you to scroll down to paragraph 09:23:31
11 66 now.
12 A. I am there.
13 Q. So going down a few sentences, do you see a
14 sentence that states: "The UTMS-configured device or
15 entity may receive the ruleset data"? 09:23:51
16 A. I see that, yes.
17 Q. The ruleset data that's received, that would
18 include the ruleset data that is initially
19 implemented by the UTMS-configured device, correct?
20 MR. PRICE: Objection. 09:24:13
21 THE WITNESS: Could you please repeat the
22 question?
23 BY MR. DETRIXHE:
24 Q. Yes. The ruleset data that is received
25 would include the ruleset data that is initially 09:26:19

implemented by the UTMS-configured device, correct?

A. I disagree.

Q. Why is that?

A. I speak to this in my declaration for the IPR 2023-00445, for example, in paragraph 92 where I 09:26:36 explain that the initial alleged dynamic security policy is not received, but is instead put into the system by a graphic user interface by a human controller and that instead there are updates that are received instead. 09:27:13

Q. You would agree that here in paragraph 66, Law discloses that the UTMS-configured device may receive ruleset data, correct?

A. I agree with that, but I disagree that includes an initial set of rules. 09:27:54

Q. I'll get there in a second. Is it your position that the system of Law would not be able to operate without a human operator serving as an intermediary between the received ruleset data and the ruleset data that is implemented on the mass 09:28:19 configured devices?

MR. PRICE: Objection, foundation.

THE WITNESS: I don't understand that question. You're asking about something that seems quite far away from that Law is teaching. 09:28:35

BY MR. DETRIXHE:

Q. Law right here directly states that the UTMS-configured device may receive the ruleset data as we've just acknowledged.

So my question is before that -- and you would agree that Law also discloses implementing the received ruleset data, correct? 09:28:47

MR. PRICE: Objection.

THE WITNESS: I'm not sure what you're referring to now as the received ruleset data. 09:29:01

If by that you mean data that is an update to the user input ruleset data, then yes, that is received. That's not the initial data.

BY MR. DETRIXHE:

Q. Are the rulesets 147 received? 09:29:23

A. Do you have a place in Law or my declaration where you would like me to address that question?

Q. Yes, just continue reading the sentence here. "The UTMS-configured device or entity may receive the ruleset data," and then just below that, it refers to accessing the ruleset data 147. 09:29:43

MR. PRICE: Objection.

THE WITNESS: What is your question?

BY MR. DETRIXHE:

Q. Ruleset data 147 is received by the 09:30:01

UTMS-configured device, correct?

A. I don't see that here. That doesn't follow from these sentences.

Q. So is it your testimony that Law does not disclose receiving the ruleset data 147? 09:30:16

A. I don't see that here. If there is another place in my declaration or in Law you would like to paint me to, I would be happy to look at that.

Q. In your opinion having read Law, where do you think the ruleset data 147 comes from? 09:30:32

A. I speak to this for example, in my paragraph 151 where I explain: "While an operator with intimate knowledge of the process control system creates the initial rulesets, third party IT personnel are still required to update the rulesets 09:31:02 when new threats are discovered or upgrades to software components of the system are implemented."

And then it gives cites to Law to support that conclusion.

Q. Turn to paragraph 88 of Law. 09:31:39

A. I am there.

Q. The second sentence states: "With reference to figure 3, a third-party, cyber security risk management Firm 305, such as Wurldtech Security Inc., of Vancouver, BC Canada, or other entity, may collect 09:32:25

threat data 310 from a plurality of various sources 315 to construct the various rulesets 147, 148, 151, 153, validate the rulesets, verify, and distribute the rulesets to the UTMS-configured firewalls 146a, 146b, UTMS-configured access devices 149c, other 09:32:54
UTMS-configured network devices 146, and/or UTMS field devices 134."

So isn't it true that here in paragraph 88, Law explicitly states that the Firm 305, quote, "distributes the rulesets, including ruleset 147 to 09:33:30
the UTMS-configured firewall 146a and 146b"?

A. I'm sorry. What was the question?

Q. That sentence of Law in paragraph 88 that we've just read, explicitly states that the Firm 305 distributes the rulesets 147 for firewalls 146a and 09:33:54
b?

(Technical issue.)

MR. DETRIXHE: Back on the record. We had a bit of a disconnection on Zoom, but looks like everyone is back. 09:41:41

BY MR. DETRIXHE:

Q. For clarity, I'll repeat the pending question which is we're looking here in paragraph 88 of Law and it explicitly states that cyber security risk management Firm 305 constructs the various 09:41:59

rulesets 147 and distributes the rulesets to the UTMS-configured firewalls 146a, 146b; is that correct, Dr. Goodrich?

A. This must be understood in the context of the overall discussion which begins already 09:42:21 previously with paragraph 87 which explains that the operators and other plant personnel monitor and maintain the network security of the process control system 100, and likewise, now when we're reading in paragraph 88, this also should be read in the context 09:42:45 of the first sentence of paragraph 88 which explains that as previously described, the various rulesets, e.g., the rulesets 147, 148, 151, 153 associated with the UTMS-configured network devices 146, 134, 149, 152 require updates to remain effective against 09:43:16 network threats.

And then likewise, when we go to paragraph 90, paragraph 90 says: "Because the UTMS-configured network device 134, 146, 149, 152 is configured as a process variable (as described 09:43:43 above), the rulesets 148, 147, 151, 153 may be configure able by an operator or other personnel from a graphic display 129 at a work station 120."

So when a person of ordinary skill in the art is reading paragraph 88 and is reading this word 09:44:08

"distributed," that person of ordinary skill in the art would understand this is in reference to the updates to the ruleset, such at the rulesets 147.

Q. Thank you, Dr. Goodrich.

So just to make sure I understand your opinion correctly, you're saying that there is a difference between updates and the ruleset 147 and you're saying that the ruleset 147 is not actually distributed to the firewalls 146a and b; is that correct? 09:44:25 09:44:51

MR. PRICE: Objection, mischaracterizes testimony.

THE WITNESS: No, that's not what I'm saying. Instead, what I'm saying is I, for example, explained in my paragraph 51 and other paragraphs that follow in my declaration, the initial ruleset 147 is created using the graphical user interface by the operator, because as Law makes clear, these systems are protecting the very specialized equipment, such as for nuclear power plants and the operator knows that environment better than anyone. 09:44:58 09:45:20

But then in paragraph 88, it explains that updates to those rulesets, there could be components that refer to things that obviously wouldn't be needing updating, hence the updates to those rulesets 09:45:39

can be provided using this Firm 305.

BY MR. DETRIXHE:

Q. Does the Firm 305 distribute rulesets, yes or no?

A. It distributes updates to rulesets. So if 09:45:57 by "ruleset," you mean an update to an existing ruleset, the answer is yes. If your question is asking about an initial ruleset 147, then the answer is no.

Q. When Law refers to ruleset 147, is it your 09:46:10 opinion that that reference to ruleset 147 is only a reference to an update to the ruleset 147?

A. No, that's also not what I'm saying.

So instead what I'm saying is that understanding what Law is referring to, of course 09:46:34 when it's referring to ruleset 147, requires context.

In the context of paragraph 88, it's referring to the updates to the rulesets.

In paragraph 90, it's referring to the initial putting into the system of ruleset by the 09:46:50 operator.

Q. Are updates to rulesets, rulesets themselves or is there something that would be required to transform those updates into a ruleset?

A. I'm not understanding what you mean by that 09:47:13

1 question.
2 Q. In your answer you just provided, you
3 referenced updates to rulesets that are what the Firm
4 305 is providing. And so my question is are the
5 updates to rulesets provided by Firm 305, are those 09:47:25
6 rulesets themselves?
7 A. Is there a place in my declaration or in Law
8 where you feel that that is addressed? I don't
9 recall having addressed that question.
10 Q. I'm asking is an update to a ruleset, a 09:47:44
11 ruleset?
12 A. Just to be clear, there is no place in my
13 declaration where you feel I've addressed that
14 question?
15 Q. I'm asking for you to interpret the 09:48:02
16 reference right here, the paragraph we're focusing on
17 in paragraph 88, which I understand your testimony
18 that this is referring to updates to rulesets.
19 And my question to you is whether an update
20 to a ruleset is a ruleset? 09:48:19
21 A. I would answer it the way I did before --
22 MR. PRICE: Objection, incomplete
23 hypothetical.
24 THE WITNESS: An update to a ruleset is just
25 that. It's an update to a ruleset. That there is an 09:48:35

existing ruleset, that then the update is providing new data to modify existing rules or configurations in the rules with new parameters.

BY MR. DETRIXHE:

Q. If I understand you correctly, the update to the ruleset provides data that would need to be combined with an existing ruleset in order to be a new ruleset; is that right? 09:48:55

A. That sounds very close to what I'm saying.

Q. Okay. I think I understand you. Thank you. 09:49:11

How would a person of skill in the art reading Law be able to understand -- strike that.

As we initially discussed, the rulesets 147a, 147b are implemented on the firewalls 146a and 146b, correct? 09:49:46

A. I agree.

Q. And so when Law is discussing these rulesets 147, 147a, 147b, how would a person of skill in the art know whether that ruleset 147, 147a, 147b, refers to a complete ruleset or simply data that would need to be combined with other data to form a ruleset? 09:50:11

A. It's easy from the context. For example, the context in paragraph 88 is clear that this is referring to updates to the rulesets, so this is what it's referring to when it talks about 147 here, this 09:50:36

distribution is distributing updates to the rulesets. It's simple from the context. That's how a person of ordinary skill would understand it.

That's why I also referenced paragraph 90, which refers back to the earlier paragraphs and 09:50:49 explains that the operator using the graphical user interface, enters the rulesets.

Q. I would like to ask you a hypothetical. In scenario A, which I understand to be your view on Law, there is update data that's provided by Firm 305 09:51:54 which is used maybe in conjunction with other data to form a ruleset.

And then let's say scenario B which is how I would interpret paragraph 88, the complete ruleset is distributed by Firm 305. 09:52:19

And my question is, suppose that those two interpretations of Law are -- suppose I were to credit your interpretation of Law as one way of reading Law, wouldn't it have been obvious to a person of skill in the art, that the distributed 09:52:47 rulesets could be the complete ruleset?

MR. PRICE: Objection, form.

THE WITNESS: So first, I don't agree with your characterization of my opinion as hypothetical A, but even under your interpretation of 09:53:08

hypothetical A, I disagree it would be obvious to do the scenario of the hypothetical B, and the reason for that is that stepping back a bit, Law is teaching about these very specialized systems that have mission critical components that are very 09:53:36 specialized, such as for nuclear power plants, hence having a generic ruleset that would apply to all scenarios is not feasible.

Instead, what is required in specialized rulesets that are created and entered by operator who 09:54:00 understand their systems intimately and then there can be a Firm 305 that can provide updates when those rules are referring to, let's say commercial off-the-shelf software such as windows. That can be updated from Firm 305, but the specialized rules 09:54:18 cannot.

BY MR. DETRIXHE:

Q. Thank you, Dr. Goodrich.

I believe you mentioned this a little bit earlier that Law discloses an embodiment where an 09:54:40 operator can configure the rulesets, including the updated rulesets that I received and so I just want to make sure I understand your opinion.

So let's say when the system of Law receives the ruleset data referenced in paragraph 88 for an 09:55:08

update, are you saying that an operator in Law would be required to receive that update data and configure the firewall with that update data in order for the updated ruleset to take effect?

A. So if you look at Law now in paragraph 91, I 09:55:39
believe it addresses this question and it says: "Additionally, each operator may have integrated control over ruleset updates directly from their respective operator displays."

Q. So did you interpret that sentence in Law to 09:56:09
require an operator be present to receive and initiate enforcement of the updated ruleset?

A. I believe that that shows that not only is there an operator who has control over and would be facilitating the update, but as I explained in my 09:56:32
declaration, the updates themselves are also coming from people. They're not an automatic update.

Q. Turn to paragraph 83 and look at the last sentence and let me know when you're there?

A. I'm there. 09:57:29

Q. It states: "Detection of certain network conditions may also trigger an automatic update of the rulesets 147, 148, 151, 153 or an alarm to prompt a user to perform a manual update of the rulesets or other action to fully secure the system 100." 09:57:50

Isn't it correct, Dr. Goodrich, that this sentence distinguishes between automatic updates and manual updates?

A. I think you have to be clear here and a person of ordinary skill in the art would understand 09:58:28 that here, this is referring to automatic in the sense that it's triggering the requirement of an update on the device and that this is different than not disclosing that the Firm 305 is automatically generating and sending the rules to the device and I 09:58:49 explained this, for example, in my paragraph 83 in my declaration.

Q. Still focusing on the last sentence of paragraph 83, in your view, what is the difference between the triggering of an automatic update of the 09:59:06 rulesets 147 or the performing of a manual update of the rulesets?

A. So again, to be clear, this is on the device again, not from the perspective of the Firm 305. So on the device, there can be an automatic update 09:59:32 trigger or an alarm to prompt the user to perform a manual update, but this does not imply that there is an automatic generation of rulesets.

Instead this is just an automatic triggering of an update or an automatic alarm to perform a 09:59:50

manual update.

Q. I'm still a bit confused. Quoting from this sentence, it references triggering an automatic update of the rulesets. So are you saying that an automatic update of the rulesets doesn't actually 10:00:16 update the rulesets?

A. No, that is mischaracterizing what I'm saying.

Q. What are you saying?

A. Again, to be clear, this is an event that 10:00:26 happens on the device, not from the perspective of Firm 305 and that the device either has a trigger that causes an automatic update to the rulesets or that trigger causes an alarm to profit the user to do a manual update. Simply that. 10:00:48

Q. Or the automatic updates of the rulesets, is any action required from the user in order for the updated rulesets to take effect?

A. We also have the teachings in paragraph 91 that go along with that. So even in the context of 10:01:06 an automatic update, we still have the teaching that each operator may have integrated control over ruleset updates directly from their respective operator displays.

So in the context that have teaching and 10:01:24

paragraph 83, a person of ordinary skill in the art would understand, even in the context of an automatic update there, still would be input from the operator, for example, to accept that automatic update which is different than performing a manual update, as is 10:01:42 shown in that last sentence of paragraph 83.

Q. How is that different?

A. So in the case of accepting an automatic update, all the user, the operator would have to do is click something like an okay or accept type of a 10:01:58 button to then trigger, for example, a device going and performing the update automatically. In contrast, if the alarm just signals and says you need to do an update, then a manual update would require more effort, perhaps even rewriting a rule in the 10:02:20 ruleset.

Q. So if I understand you correctly, it's your opinion that the automatic update referencing the fetching of the rule data for the updated rule, but not actually implementing it, which in your view, 10:02:47 would require human approval, whereas the manual update refers to manually constructing both the rule and the implementation of the rule?

A. That's inclusive of what I'm saying here. When you read paragraph 83 in the context of 10:03:03

paragraph 91 in this reference.

Q. Looking at paragraph 91, it states that an operator "may have integrated control over ruleset updates." That sentence doesn't state the operator control is required, does it? 10:03:33

A. No, that sentence does not. There is other teachings that also talk about the rule of operators as well.

Q. What teaching in Law states that the operator having integrated control over ruleset 10:03:49 updates is a requirement, rather than a separate embodiment?

A. Could you please repeat the question?

Q. Yes. I believe we just agreed that the sentence in paragraph 91 that describes that an 10:05:49 operator may have integrated control over ruleset updates, that that refers to a particular embodiment, although I understand it's your opinion that based on other teachings of Law, a person of skill in the art would understand that the operator having control 10:06:12 over ruleset updates is required rather than simply an embodiment.

So my question for you is to direct me to those teachings in Law that you're relying on for your interpretation of the sentence as being a 10:06:26

requirement, rather than simply another embodiment?

A. So there are several teachings in Law that speak to this. So for example I find that in paragraph 24, Law states: "If the network traffic received at the secured device violates one or more 10:10:15 of the rules, the object denies the network traffic access and displays an alarm in the operator interface of the process control system."

There is no language of "may" or "can" there. 10:10:34

Q. Which paragraph?

A. Again that was paragraph 24 of the disclosure.

Q. Before we move on --

MR. PRICE: Excuse me, Counsel, let the 10:10:40 witness finish answering the question, please.

BY MR. DETRIXHE:

Q. I will, but before we move onto a different example, I would like to ask you questions on this example before we move on, if that's okay, 10:10:53 Dr. Goodrich.

A. May I finish my answer, please?

Q. Sure. You can finish.

A. So again, that was paragraph 24 and then we also see in paragraph 61 where it states: "The 10:11:08

1 process graph display element 127, which will be
2 described in more detail below, and generally
3 elements that display within operator, engineer or
4 other displays to provide information to a user, such
5 as an operator about the operation, configuration, 10:11:29
6 network security, or set-up of the process plant and
7 the elements therein."
8 Again, there is no "may" or "can" language
9 there.
10 Then we have paragraph 83. "These displays 10:11:47
11 have graphic display elements designed to dynamically
12 show online measurements and actuators that interface
13 the control system and as a result, may present
14 information typically monitored and utilized by
15 operators or other personnel involved in online 10:12:13
16 operations."
17 I stress the word "online" there which means
18 continuous and not offline operations.
19 And likewise in paragraph 87 it says: "The
20 graphic display elements within each display are 10:12:30
21 designed to dynamically show online measurements and
22 actuators that interface with the control system and
23 as a result, may present information typically
24 monitored and utilized by operators or other
25 personnel involved in online operations." 10:12:49

And then finally in paragraph 87, which we had talked about before: "Graphic elements within the displays that represent the UTMS-configured network devices 134, 147, 149, 152 provide network parameters and security data (as described above) to 10:13:14 operators and other plant personnel to monitor and maintain the network security of the process control system 100."

Again, there is no "may" or "can" language there. 10:13:32

Q. Anything else?

A. No.

Q. So in your answer you just described various information can be displayed to an operator. The display of information to an operator, say alerting 10:14:00 the operator to -- that the ruleset has automatically been updated, that wouldn't simply displaying the information to the operator wouldn't necessarily require that the operator accept the updates, would it? 10:14:22

MR. PRICE: Objection, form.

THE WITNESS: So again, I think you're mischaracterizing what I'm saying. I'm saying that there is certain information that must be displayed to the operator and that the operator is, as a person 10:14:35

of ordinary skill in the art would understand, an integral component to the operation of the device through this graphical interface and that because this is happening in an online context, a person of ordinary skill in the art would understand that the 10:14:56
operator is an integral step in any update or change to the system.

BY MR. DETRIXHE:

Q. And so let's suppose that rulesets are distributed, but an operator has to click a button 10:15:19
that accepts the ruleset before the ruleset is actually implemented.

Is it your opinion that that activity would be outside the scope of the claims?

A. That depends on what you mean by 10:15:45
"distributed."

So if by "distributed," you're referring to an initial distribution, I disagree that that is taught in Law or that it would be obvious from the teachings in Law. 10:15:56

If by "distributed" you instead are referring to an update to a ruleset, then I believe that Law does teach that you could have a display that appears on the graphical user interface that then the operator would click onto accept the update 10:16:12

into the system, but that that update as taught in Law, would not be automatically generated by the Firm 305.

Q. Because the operator has to accept the rule; is that right? 10:16:38

A. If you're referring to the last part about why the update coming from Firm 305 is not automatically generated, that is due to other teachings in Law.

It doesn't necessarily have bearing on the 10:16:52 question of whether or not the operator clicks to accept it.

Q. Before we go there, let's go paragraph 24 of Law. You agree that this describes one embodiment, correct? 10:17:17

A. Yes. This is in the summary section of Law and so it does indeed describe one embodiment.

Q. So the teachings from this paragraph wouldn't necessarily apply to all embodiments, would they? 10:17:31

A. It depends what you're referring to as the teachings of this paragraph. In this paragraph, it's talking about an embodiment using an objection having a programmable interface that communicates with a particular process control system device. So it's 10:18:20

1 talking about the functionality with respect to this
2 object. So that is a person of ordinary skill in the
3 art would understand that that is a specific
4 embodiment, but then sentence I read is then talking
5 about a general teaching that then would be focused 10:18:39
6 in on this embodiment that uses an object.
7 Q. The sentence that you relied on, let's just
8 read the end, the second to last sentence: "If the
9 network traffic received at the secured device
10 violates one or more of the rules, the object denies 10:19:22
11 the network traffic access and displays an alarm in
12 an operator interface of the process control system."
13 I believe that's the sentence you relied on
14 for your opinion that operator involvement is a
15 requirement rather than an optional feature; is that 10:19:38
16 correct, Dr. Goodrich?
17 A. Yes. That was one of the sentences that I
18 relied on in responding to your question.
19 Q. And that sentence refers to the object,
20 which you just explained was one of the aspects of 10:19:52
21 this specific embodiment, correct?
22 A. That is correct and then a general teaching
23 with respect to that specific object.
24 Q. What in Law -- what in this paragraph
25 explains that that specific teaching is a requirement 10:20:13

for all embodiments as opposed to this specific embodiment?

A. I think you're misunderstanding what I'm saying here. What I'm saying, to be clear, is that the teaching in paragraph 24 is with respect to the 10:20:28 object embodiment as we just discussed, but the general teaching is that the operator interface is a critical component and requirement in the system. And so that is what I'm inferring to from that sentence. 10:20:48

That in a specific embodiment using an object, we still see that operator interface is required.

Q. Go back to your opinion that the received ruleset -- that the rulesets received by the 10:21:39 firewalls 146 in Law from the Firm 305 do not include the rulesets initially implemented by the firewalls and I believe there was some discussion that in your view, the ruleset data provided by the Firm 305 is data that can be used in constructing rulesets, but 10:22:19 not the actual rulesets.

Is that the reason why you wouldn't think that the ruleset initially implemented by Law would have been received?

MR. PRICE: Objection, form. 10:22:48

THE WITNESS: I believe you're mischaracterizing what I state. So I believe very clearly, you spell out the support that I have for why the initial ruleset is entered by the operator, and is not received from the Firm 305. I speak to 10:23:03 that in several paragraphs in my declaration. If we want to go to any of those, I would be happy to do that.

But I don't agree with your characterization of my testimony in the preamble to your question. 10:23:19

BY MR. DETRIXHE:

Q. As we previously read in paragraph 88, Law discloses that the Firm 305 constructs rulesets 147 and distributes those rulesets to the firewalls.

So my question to you is, is there any 10:24:00 teaching in Law that states that the distributed rulesets cannot include the initial ruleset?

A. I don't agree with your characterization of paragraph 88. We had discussed this earlier. I thought I had clarified this, namely that 10:24:20 paragraph 88 is referring to updates to the rulesets, hence the ruleset data and what it's referring to as it's rulesets in this context is we're referring to updates to the initially produced rulesets that were created by the operators, and I believe that's clear 10:24:39

from the teachings in Law and that it would not be obvious to jump to the alleged configuration that you had mentioned in your question absent hindsight.

Q. If Law explicitly discloses providing updated rulesets, why wouldn't it have been obvious 10:24:59 to a person of skill in the art to also provide the initial rulesets?

A. Because as I had answered earlier, a person of ordinary skill in the act would understand Law to be teaching about very specialized plants such as 10:25:16 nuclear power plants that have very specialized equipment, hence generic ruleset would not be applicable in this context, hence, and indeed it explicitly states that the operator creates the initial rulesets. 10:25:40

The operator, knowing the specific configuration, specific hardware, specialized equipment that it's using, and then would allow for updates to those initial rulesets from the Firm 305 for such things as generic components that are then 10:25:58 used in these specific scenarios.

But the specific scenarios require specialized rulesets.

Q. If a generic ruleset would not be -- if the initial ruleset would not be applicable, why would 10:26:13

updated rulesets be applicable?

A. Because specialized hardware such as is referenced in Law and discusses even how you can do specialized configurations of these devices that allow for what it refers to as bypass functionality, 10:26:40 it shows schematic diagrams of these valves and processes, for example, in figures 9 and 12 could nevertheless have components that would be, for those parts of them, things that generic rules could apply to, but because of the specialized nature of the 10:27:13 device, a generic rule does not apply but there could be components that are referenced in the rules that then would be needing updating, that then could come from the Firm 305.

Q. So in your view, if I understand correctly, 10:27:32 the rulesets provided by Firm 305, only include generic rules and not rules that are specifically targeted to the environment of particular fires 146 or the system protected by those firewalls?

MR. PRICE: Objection, misstates testimony. 10:27:58

THE WITNESS: I would answer it the way I did before, that you were asking about why it would not be obvious to do the modification that you are contemplating and that's what I was trying to explain to you. 10:28:15

When we look at the big picture aspect of what is taught in Law that, that modification would not be obvious.

BY MR. DETRIXHE:

Q. Because in your view, the Firm 305 doesn't know the particular details of the system protected by firewalls 146; is that right? 10:28:29

A. Yes, for example.

THE REPORTER: Is this a good spot for a quick bathroom break? 10:31:47

MR. DETRIXHE: We can take a break.

MR. PRICE: Works for me.

(Recess taken.)

MR. DETRIXHE: Back on the record.

THE WITNESS: Before you ask another question, may I amend an earlier answer? 10:41:14

BY MR. DETRIXHE:

Q. Which answer?

A. To the question of what support do I find in the patent specification of Law to support my view that user -- operator input is required. 10:41:22

Q. Yes, please do.

A. So additional support is also found, for example, in Figure 13 and the accompanying text from the patent application specification that explains 10:41:42

that Figure 13 is showing an example of ruleset user interface.

And we see, for example, in Figure 13, a column 1324 that requires the operator to click on a rule to enable it and likewise, we see in Figure 13 10:42:01 specific addresses such as 10.4.0.0 and 232.108.116.118 that would be specific to a specific configuration.

And similarly, when we go to paragraph 103, we see that a ruleset can include hardware specific 10:42:33 addressing and/or human readable addresses to be referenced by domain name server, and so this is additional evidence that generic rulesets from Firm 305 would not be applicable in the context of Law because of the specialized nature of the networks and 10:42:57 devices taught in Law.

Q. Thank you, Dr. Goodrich.

Before the break we had been discussing your interpretation of Law that the initial ruleset implemented by Law's firewalls are manually 10:43:16 configured by an operator.

So I would like to ask, in your view, would the operator request a rule update from the Firm 305 before the initial implementation of that ruleset?

A. I don't see anyplace in Law where that is 10:43:38

taught. Is there a place in my declaration or Law where you feel that is taught or discussed?

Q. If an update isn't performed before the initial implementation of the ruleset, wouldn't there be a risk that the initially implemented ruleset 10:43:52 would be outdated?

A. I'm sorry, I don't understand your question. What is the context of this question?

Q. I'm referring to your view that an operator is solely responsible for the initial implementation 10:44:09 of the ruleset without having done any updates to that ruleset.

So my question is wouldn't the ruleset be outdated when it's initially implemented?

A. I'm sorry, I don't understand your question. 10:44:29 It seems to be self-contradictory. Your question itself appears to be self contradictory.

Q. How so?

A. You're referring to an initial ruleset that has an update before it even exists. That seems 10:44:44 self-contradictory to me.

Q. I'm referring to -- it's my understanding of your opinion that the operator manually generates or con figures an initial ruleset that is implemented by the firewall; is that not correct? 10:45:05

A. That part is correct.

Q. Wouldn't there be a risk that that initial ruleset is outdated?

A. That's the part I don't understand your question. That seems self contradictory. 10:45:23

As we talked about earlier, an initial ruleset is a ruleset that is configured for specific hardware and configurations and we went over an example in Figure 13 that shows that specific configurations, and as we talked about earlier today, 10:45:39 there could be components in a ruleset that are referencing generic things that then in the future, would be updated, but it doesn't make sense to talk about updates to an initial ruleset that then would exist before the initial ruleset exists. 10:45:56

Q. Would you agree that a central purpose of Law's updates to the rulesets that are distributed by the Firm 305, are to maintain protection for the network and that if those rulesets were not updated, that would be contrary to the goal of protecting the 10:46:37 network?

A. I'm not disputing that updates are useful and taught in Law. That they are updates that are taught in Law. They come from the Firm 305 that, in my opinion, are not automatically generated, but then 10:46:56

those updates come to already existing rulesets that were input by the operator -- that the initial rulesets did not come from the Firm 305.

Q. Would you agree that a central purpose of Law is to mitigate the risk of a network attack into the system? 10:47:18

A. I don't dispute that. Law teaches that it is protecting against external network attacks.

Q. So let's look at paragraph 10, the last sentence that states: "Any external connection into a process control system network presents a possible point of attack into the system," correct? 10:47:47

A. Yes, it says that.

Q. And right below it, top of paragraph 11, it states that: "Network devices such as firewalls typically provide security for process control networks and mitigate the risk of network attacks," correct? 10:48:07

A. Yes, this is in the background section, description of related art. 10:48:19

Q. I would like you to turn to paragraph 53 of Law.

A. I am there.

Q. The second sentence states: "The process control system 100 may include one or more subsystems 10:48:45

105a, 105b, one or more process control networks 150a, 150b and one or more process controllers 110 communicatively connected to one or more host work stations or computers 120-122 (which may be any type of personal computers, work stations, etc.), at least one having a display screen, via one or more network devices 146 over a process control network 150." 10:49:10

So my question, as we've just seen in paragraph 53 of Law refers to both a process control network 150, as well as one or more process control networks 150a, 150b, correct? 10:49:34

A. Yes, and a person of ordinary skill in the art would understand that when Law is referring to the process 150 network, that it's referring to either 150a or 150b. 10:49:54

Q. Let's look at figure 1A of Law.

A. I am there.

Q. On the left side is process control network 150a, correct?

A. Yes, I agree. 10:51:04

Q. And on the right is process control sub network 150b, correct?

A. Yes, I agree.

Q. And in figure 1A, there is a firewall, but in general, the networks are separated by the 10:51:21

internet 155, correct?

A. Yes, that is correct.

Q. Now let's look at figure 1B, and again on the left side is process control sub network 150a, correct? 10:51:48

A. Yes, I agree.

Q. And on the right is process control sub network 150b, correct?

A. Yes, I agree.

Q. And here, those two sub networks are joined by a network access device 149c, correct? 10:51:57

A. I would instead characterize this that they are separated by a network access device 149c just as we've talked about how they're separated by the internet as shown in figure 1A. 10:52:15

Q. In making that connection, the network access device 149c allows communication between sub networks 150a and 150b, correct?

MR. PRICE: Objection.

THE WITNESS: Law teaches in paragraph 51: "Figure 1B is an alternative embodiment illustrating a cross-system connection between the subsystem 105a and 105b including an UTMS-configured network access device 149c that may or may not include a ruleset such as ruleset 151c as herein described and may 10:54:09 10:54:32

control different types of process control network connections as described below."

So if your question is does that network access device allow communications between the left side and the right side, a person of ordinary skill 10:54:51 in the art would understand that it does, provided that those communications do not violate the ruleset 151c.

BY MR. DETRIXHE:

Q. Thank you, Dr. Goodrich. 10:55:07

I think if you look over in paragraph 51 going down to paragraph 53 states it is last sentence: "While the process control system 100 of figure 1a shows only two process control subsystems, 105a and 105b communicating over internet 155 as a 10:55:33 WAN, and the process control systems 100 of figure 1b showed only two process control systems 105a and 105b communicating over a LAN, a process control system 100 may include any number of subsystems, as well as devices, modules and components that are 10:56:02 communicatively connected to each other through any type of connection, including internet, LAN, wireless, twisted pair cable, optic fiber, etcetera, to name only a few."

Does that portion of Law confirm your 10:56:18

1 understanding in figure 1B the network access device
2 149c provides for communication between sub networks
3 150a and 150b?
4 A. Yes, this is consistent with what I said.
5 Provided that those communications between those two 10:56:45
6 separate sub networks does not violate the ruleset
7 151c, then they are allowed.
8 Q. In this figure 1b embodiment, that
9 communication does not occur over internet, does it?
10 A. It does not in this case. It's going 10:57:12
11 between two separate sub networks using this network
12 access device 149c.
13 Q. I would like to go down to figure 3 and here
14 again on the left side, we have process control sub
15 network 150a and on the right we have process control 10:57:46
16 sub network 150b, correct?
17 A. Yes, I agree with that.
18 Q. So in this figure at the top we see a dotted
19 line connecting firewalls 146a and 146b separated by
20 the internet 155, similar to what we saw in figure 1a 10:58:15
21 and then in the middle, we see a network access
22 device 149c also connecting the sub networks 150a and
23 150b, similar to what we saw in figure 1b, correct?
24 A. I would characterize it the way I did
25 before, that indeed, the network 150a on the left is 10:58:41

separated by the internet and now also separated by the network access device 149c from are the sub network 150b on the right.

Q. With regard to the connection of sub networks 150a and 150b, the network access device 149c, that doesn't occur over internet, does it? 10:59:15

A. If by that question you're referring to communications that flow through the network access device 149 c, those communications in this example would not necessarily flow through the internet 155. 10:59:40

Q. So let's assume that those communications, all of the communications flowing through network access device 149c are part of the local network, a LAN embodiment as described in figure 1b and not over the internet, as I think you just said is a possibility. In that situation, couldn't subnetworks 150a and 150b be considered a combined network? 11:00:19

MR. PRICE: Objection.

THE WITNESS: No.

BY MR. DETRIXHE: 11:00:44

Q. Why not?

A. I speak to this in my declaration. There is multiple teaches in Law that explain that the sub network 150a and 150b are separate and that they would have, for example, separate specialized 11:01:04

1 devices, separate functionalities, that then it would
2 not be obvious to combine them into a single network
3 either.
4 Q. I'll ask you a hypothetical. I would like
5 to understand -- putting Law aside for the moment, 11:01:24
6 let's just say I have one network which I'll call a
7 and another network which I'll call b and let's say I
8 have a single wire connecting the two, not through
9 the internet, but just one device let's call it a
10 network access device joining those two networks a 11:01:53
11 and b.
12 So my question is what -- would it be fair
13 to call those combined -- the combination of networks
14 a and b as a single network, let's say c, and if not,
15 why not? 11:02:22
16 MR. PRICE: Objection as to form.
17 THE WITNESS: That depends on the context of
18 how the networks are connected and what their
19 respective functionalities are. So if in the a
20 system such as Law where there is highly sensitive 11:02:41
21 devices on each side and you want to isolate the risk
22 of attacks, then no, they would not be considered as
23 a joint network, but there may be other context
24 that's have nothing to do with specialized equipment
25 that would then depend on the context whether or not 11:03:06

that would be considered as a single network.

BY MR. DETRIXHE:

Q. Give me an example where in my hypothetical and those networks a and b were combined that you would say would be fair to consider the combination network c as a single network, rather than two separate networks? 11:03:19

A. Sure. So first you would need to connect them, not with a network access device as is taught in Law that has rulesets associated with it for communications. 11:03:38

Instead, you would have to connect them with say a switch that always routes packets between the two and never blocks, never applies rules at all.

And then secondly, you would also have to have both sides be considered a part of the same enterprise, such as say a home network where the first floor would be the network on the left and the upper story would be the network on the right and you would connect them with a device that does not have any of the properties of the network access device 149 as taught in Law. 11:03:53 11:04:13

Q. Thank you, Dr. Goodrich.

Continuing with this example, let's work from the opposite direction. So let's say going with 11:04:48

your home example, let's say I have a single firewall going out to the internet, but then -- let's say I have a computer connected to the firewall and then let's say it branches out into a first floor a and second floor network b, each with their own computers 11:05:22
and what not connected to them. Would you consider those networks a and b for the first and second floors to be part of my home network?

A. In this example when you had this first computer connected to the internet and then it is 11:05:53
connected to the first floor and the second floor computers, are those direct connections objection are those going through a switch, a hub, or a router?

Q. Let's initially assume that they go through a switch. 11:06:14

A. How is that switch configured? How do you connect it to those other components?

Q. So to clarify, I understand that it's your opinion whether that the home network can be considered a single network, depends on how those 11:06:34
connections are made and what functions are performed by the switch; is that right?

A. Yes, because it matters.

Q. So if I understand your opinion correctly, if the switch is, let's say a smart switch and 11:06:52

implements some kind of rules or filtering, in that scenario then the two sub networks a and b would be different or separate networks in your terminology; is that correct?

MR. PRICE: Objection, foundation. 11:07:09

THE WITNESS: That also depends on the context. There is a lot of details in this hypothetical that I need clarification for.

BY MR. DETRIXHE:

Q. What details would you need? 11:07:19

A. What is the connections, how are they connected? Let's start there, because now you've said different connections existing that seem to be contradicting what you said earlier. So I'm losing the picture. 11:07:33

Q. Quite simply there is a switch and one port to the switch routes to, let's say the ground floor, and then another port on the switch has a wire connected to the upper floor and I'm going to call those sub networks the ground floor, sub network a 11:07:56 and the upper floor, sub network b and there is a single switch separating the two.

Does that help, Dr. Goodrich?

A. Earlier you had said there is also a computer that is connected to internet. Is that now 11:08:10

no longer a part of this scenario?

Q. It still is.

A. So how that connected in this hypothetical?

Q. The computer is also connected to the switch, let's say. 11:08:27

A. In this example, how do the computers in this configuration access the internet?

Q. Let's say there is a firewall connected to the switch.

A. So to be clear, all three computers to access internet, must get through the switch and then to the firewall to then get out to the internet, correct? 11:08:50

Q. Correct.

A. What is your question in this context? 11:09:09

Q. Would you consider the ground floor network a connected to the switch, to be on the same network as the upper floor network b connected to the switch, or does it depend on whether the switch implements rule filtering for traffic that goes between the ground floor sub network a and the upper floor sub network b? 11:09:26

A. In this hypothetical, it would at least depend on that configuration of the switch, whether or not it's performing rules and such things. I 11:09:44

would need more time to analyze details of this to give you a definitive answer.

Q. I think I understand what you're saying which is if that switch is implementing rules that would occasionally block or potentially block traffic 11:10:01 going from the ground floor network a to the upper floor network b, that in that case, you wouldn't consider those two to be on the same network; is that right?

MR. PRICE: Objection. 11:10:18

THE WITNESS: Not necessarily. Again, I would need more time to study the details to give you a definitive answer.

BY MR. DETRIXHE:

Q. What details would those depend on? 11:10:26

A. There is a lot of still details that are missing in this hypothetical, such as, how does this switch perform those functions? Are the packets routed? How are the IP addresses or whatever network addresses you're using distributed. There are a lot 11:10:46 of details here that are missing.

Q. Can you give an example of those details where you would consider the two networks to be on the same network and that another example of those details where you would conclude that those networks 11:11:01

a and b are not on the same network?

A. Sure. For example, if the switch is a dumb switch that does not do any rule processing at all, passes all network traffic through the switch to the other side and the addressing of the devices on all 11:11:23 the side is all part of the same network address space, possibly some other details, I would consider that to be a single network, whereas if any of those things fail, so such as a network switch having rules to block traffic between the two or not, or if the 11:11:55 two sub networks have incompatible addressing schemes.

There may be other details I would want to think about more to give you a complete answer, which would take more time, but that could be an example of 11:12:14 something where the two networks would be considered separate networks.

Q. Thank you, Dr. Goodrich.

I think I am beginning to understand your opinions. 11:12:30

So I'll just ask one follow up. Let's say the device that separates sub networks a and b, initially I call them a switch, now I'm going to call them a router because I would like you to assume on sub network a, it has an address sub space of one 11:12:51

type. Doesn't matter what type it is. It could be 192.168 is a common mask for the initial eight bytes of an IP address, and then let's say the other network b for the upper floor has a different address base. 11:13:19

Let's say it also uses its own 192.168 mask. In that situation, would you consider those two networks a and b to be separate networks?

A. I'm sorry, I lost the hypothetical. I no longer can answer that question. I don't know of 11:13:41 such a router and how it would function, just sitting here today.

Q. Let's say the router performs address translation between the sub networks a and b. In that scenario, would you consider sub networks a and 11:14:00 b to be separate networks that are not part of the same network?

MR. PRICE: Objection, incomplete hypothetical.

THE WITNESS: When you say that now the 11:14:10 router is performing address translation, what do you mean by that?

BY MR. DETRIXHE:

Q. I believe that's a term that you referred to in your answer earlier. 11:14:18

A. I don't recall having said that: What did you mean in your question?

Q. You don't have a familiarity with the term "address translation"?

A. It has a broad context. What context are you using it for? 11:14:30

Q. What are the different contexts with which you're aware of?

A. There is devices that exist in networks that perform functionality that is referred to as network address translation, but that doesn't seem to line up with what you are explaining in your question. 11:14:45

Q. Let's give an overview of what network address translation refers to in your view.

A. Sure. So that also depends on context, but one example of network address translation is routing device which has on one side what it would locally consider to be an inside network, and then what it would refer to on the other side as an outside network and what it can do is for packets that are coming from the inside network that have a certain source address and port number, it can do what is called a network address translation to change the source address and port number for the outgoing packets to then be the address and port number that 11:15:06 11:15:29 11:15:53

is being used by the network address translation device.

And then likewise when packets come in to it using that address and port, it can translate that, if you will, to the local address and port of the device on the inside network. 11:16:11

Q. So in your answer, you refer to outside networks and inside networks. Is it possible for there to be multiple layers of network address translation such that with respect to traffic in the what you called inside network, that there are further networks inside of that network, and for traffic going between those networks, network address translation is also performed? 11:16:33

A. That's all possible. You can nest, if you will, the topology of how you configure network address translation devices. 11:16:51

Q. And with that background, for nested network address translation devices, would you consider those to necessarily be on different networks? 11:17:24

A. I still need more details about what you mean by this to answer your question.

Q. Just in the simple example that I believe you described of a nested network address translation scenario. 11:17:48

A. Right, but what I referred to as a nested network and address translation scenario actually encompasses many different topologies, so to answer your question would need more details about the topology in this hypothetical. 11:18:07

Q. Maybe a better way to ask would be, would you be able to provide one example involving tested network address translation that gives rise to what you would consider to be a single network and another example entailing nested network address translation 11:18:28 that gives rise to separate networks?

A. To do so would require more time. I'm not prepared to do that today unless you believe there is a place I've addressed it this in either of my declarations. I don't remember addressing this 11:18:44 question.

Like I said earlier, there is a lot of variables when we do nesting of network address translation devices. Many topologies are possible.

Q. I would like to try to summarize this 11:19:26 discussion and so my central objective is trying to understand how a person of skill in the art would ascertain whether two sub networks are separate networks when they are joined through a network address translation device or whether they would be 11:19:49

1 part of a single network, and if I understand your
2 opinions correctly, if that network address
3 translation device potentially filters traffic
4 between the two sub networks based on rules, that
5 would be a factor that in your view, you would 11:20:13
6 consider those to be separate networks.
7 And that another factor would be if network
8 address translation is performed between the two sub
9 networks, that that would be another factor
10 indicating to you that those two would be different 11:20:28
11 networks; is that fair?
12 A. Those are exemplary examples, and then in my
13 declaration, beginning at paragraph 59, I go into
14 specifics with respect to Law and we can discuss
15 those as well. 11:20:53
16 Q. I would like you to look at paragraph 63 of
17 your declaration with respect to the '266 Patent,
18 Exhibit 2012.
19 A. I'm there.
20 Q. Here you have labeled the network access 11:22:07
21 device 149c a perimeter device, correct?
22 A. Yes.
23 Q. You would agree that the fair walls 146a and
24 146b also are perimeter devices, correct?
25 A. I don't disagree with that. 11:22:41

Q. Is it your understanding that the network access device 149c is to be considered a perimeter device, then it would perform the same filtering functions as the firewall 146a?

A. I'm sorry, could you repeat the question? 11:23:17

Q. If as you just said network access device 149c is to be considered a perimeter device, it would perform the same rule filtering functions as the firewalls 146a and 146b, correct?

A. No, I disagree. 11:23:42

Q. Why is that?

A. Because it has a different topologies and different connections. So it would have a different ruleset that it would apply and we can see that support for that, for example, in Figure 13 and its 11:23:55 assumption text, as well as paragraphs 51, 52 and 92 from Law.

Q. Putting aside the question of whether the ruleset implemented by it is the same or different, for now I would like you to assume it's the same 11:24:16 ruleset, which I know is not your opinion, but hypothetically, please assume that it is applying the same ruleset in that scenario, would the functions performed by firewalls 146a and network access device 149c be the same? 11:24:39

A. I'm sorry, I don't see how that could be a functional system. For example, when we go to Figure 13 in Law, we can see that rulesets are configured with very specific information with respect to network addresses and the respective sides 11:24:59 with "from" address and "to" addresses. I don't see how that hypothetical would be functional and hence, I cannot answer your question.

Q. Ms. Anderson, could you please load into Exhibit Share, the '266 Patent, which has previously 11:25:49 been marked as Exhibit 1, and IPR 2023-445.

And, Dr. Goodrich, please let me know when you see it.

Dr. Goodrich, please let me know when you see the '266 Patent. 11:27:20

A. I have it now.

(The document referred to was marked as Exhibit 4 for identification and is attached hereto.)

BY MR. DETRIXHE:

Q. Turn to claim 1, please, specifically column 11:27:27 21 beginning at line 13 and let me know when you're there, please.

A. I am there.

Q. So this limitation of claim 1 of the '266 Patent recites: "One or more first packet 11:27:52

filtering rules of the first set of packet filtering rules comprised packet matching criteria corresponding to one or more network addresses and were automatically created or altered by the security policy management server." 11:28:13

Do you see that?

A. I do, and then it goes on with other limitations.

Q. Correct. I would like to focus your understanding of the security policy management 11:28:24 server that automatically creates or alters packet filtering.

First, would you agree that the claim requires that a security policy management server automatically create or alter packet filtering rules? 11:28:47

A. Yes, I agree.

Q. In your understanding of the claim language, can the security policy management server be owned by a commercial entity and still satisfy the claim language? 11:29:08

A. I'm not following your question, I'm sorry.

Q. I'm asking and interpreting this claim language, can the security policy management server be opened by a commercial entity and still satisfy the claim language? 11:29:24

A. I'm still not following your question.

Q. Sure, no problem. Let me rephrase differently.

Is there any requirement in claim 1 that the security policy management server not be owned by a commercial entity? 11:29:47

A. I'm sorry, this is coming in from left field, I'm not understanding your question at all. What are you asking?

Q. I believe you just agreed that claim 1 requires a security policy management server that automatically creates or alters the path filtering rules and so my question to you is whether there is a requirement in claim one that that server be owned or not be owned by a commercial entity? Or if you have no opinion on it, that's fine as well. 11:30:09 11:30:33

A. I'm not understanding your question, but if by your question you're referring to some claim language that comes after that, that says that: "The one or more network addresses and are automatically created or altered by the security policy management server based on aggregated malicious traffic information received from at least one third party malicious host tracker service located in one or more networks, other than the network protected by the 11:31:15 11:31:36

packet security gateway."

So if by your question, you're now referring to the third party malicious host tracking service, a person of ordinary skill in the art would understand that to have its plain and ordinary meeting. 11:31:54

Q. I'm referring to -- let's scroll up a little bit in claim 1, column 21, line 3: "Receiving, by the packet security gateway and from a security policy management server, external from the network protected by the packet security gateway, a dynamic 11:32:34 security policy comprising a first set of packet filtering rules to be applied to all that work traversing the boundary."

Do you see that limitation?

A. Yes, I see that. 11:32:48

Q. So that limitation requires that a packet security gateway receive a first set of packet filtering rules from a security policy management server, correct?

A. Yes, I agree with that. 11:33:07

Q. And that server must be the external from the network protected by the packet security gateway, correct?

A. I agree with that as well, just based on the claim language. 11:33:17

Q. So my question is regarding the server that provides that ruleset, are there any limitations in the claim that specify one way or another, whether that server is owned by a commercial entity?

A. That's the part of your question I don't understand. Commercial entity in this context. 11:33:44

Q. Any type of business, for example, or any person that's running the business?

A. I'm still not following how this -- I'm not following your question, sorry. I do speak about Firm 305 being a commercial entity and what are the implications of that with respect to the Law reference. 11:34:26

Q. Right. And --

A. Am I answering your question in that context or a different context? 11:34:41

Q. I'm asking in the context of the claim language, I do not see in reading the entirety of claim 1, any limitation that specifies whether or not the security policy management server is owned by a commercial entity and I'm just asking, do you think otherwise? 11:35:03

A. Is there a place in my declaration where you believe I've addressed this? Like I said, I do address commercial enterprises with respect to Firm 11:35:17

305 in the Law reference, but I don't recall having addressed this question with respect to the claim language of the '266 Patent.

Q. Dr. Goodrich, in forming your opinions you were required to read the claim language and interpret the claim language according to how a person of ordinary skill in the art would have interpreted the claim terms, correct? 11:35:40

A. Yes, I agree with that.

Q. So based only on that exercise that you said you've done, when reading claim 1 of the '266 Patent, do you see any requirement that the server that provide the rules to the packet security gateway that, that server be owned or not owned by a commercial entity? 11:35:56 11:36:20

A. And I still don't understand the question. I believe I do understand the claim language of the '266 Patent, but I still do not understand your question. What do you mean by "commercial enterprise" in the context of your question? 11:36:34

Q. So you can't answer that because you don't know what a commercial enterprise is?

A. That is not correct. Instead what I'm saying is I don't understand what you're referring to as a commercial enterprise in your question. 11:36:51

Q. Any business entity, a company and corporation?

A. You're asking if a corporation owns the security policy management server, how -- I'm still not following my question, I'm sorry. 11:37:09

Q. So in reading claim 1, I do not see any prohibition that the server not be owned by a commercial entity such as a company and I'm just asking, do you disagree with that?

A. I read the claim language as it's written 11:37:35 and with respect to the claim constructions that I discuss in my declaration, hence when I read and I believe a person of ordinary skill in the art reads that the security policy management server is external from the network, protected by the packet 11:37:53 security gateway and that it is automatically creating and altering rules based on traffic information received from at least one third party malicious host tracker service, that those phrases have their plain and ordinary meanings. 11:38:17

Hence, depending on what you mean by a special entity, those could have implications with respect to whether or not we consider something to be external or if it's a third party malicious host tracker service. 11:38:36

So other than that plain and ordinary understanding, I don't see any other limitations just sitting here today that specifically address ownership.

Q. Thank you, Dr. Goodrich. 11:38:59

Suppose a commercial entity like a company owns the security policy management server and I would like you to assume that it's external -- the server is external to the network protected by the packet security gateway, would it be possible to 11:39:25 satisfy the claim language if that server is overseen by an IT personnel at that company?

Let me ask differently, Dr. Goodrich. Going back to the limitation we first discussed requiring that the rules be automatically created or altered by 11:40:47 the security policy management server, do you understand that limitation to require the server to generate the rules without any involvement by an IT personnel that works at a company that owns the server? 11:41:08

A. I understand "automatic" to have its plain and ordinary meaning, that the generation itself, that process of creating or altering is itself automatic, that that process does not involve human intervention in order to success. It can be 11:41:28

1 configured and set up by humans, but the automatic
2 creation and altering is automatic as the claims
3 require.
4 Q. Without human involvement, correct?
5 A. Correct, for that part. The automatic 11:41:47
6 generation or altering.
7 Q. Thanks. I just wanted to make sure I
8 understood how you interpreted that language.
9 Ms. Anderson, could you load into
10 Exhibit Share the '474 Patent previously marked as 11:42:02
11 Exhibit 1 in IPR 2023-44H.
12 (The document referred to was marked as
13 Exhibit 5 for identification and is attached hereto.)
14 BY MR. DETRIXHE:
15 Q. Dr. Goodrich, let me know when you see that. 11:42:18
16 A. I have that in front of me.
17 Q. I would like to direct your attention to
18 claim 1 which is in column 25 of the '474 Patent.
19 A. I'm there.
20 Q. And the proceeding limitation that begins "I 11:43:24
21 believe" in line 37?
22 A. I see that.
23 Q. This limitation recites receiving by the
24 packet security gateway, and from the security policy
25 management server, a dynamic security policy 11:43:40

comprising packet filtering rules where in one or more of the dynamic security policy or one or more of the packet filtering rules of the dynamic security policy were automatically created or altered by the security policy management server based on malicious 11:43:58 traffic information, and the claim language continues.

Do you see that portion of that limitation, Dr. Goodrich?

A. You missed one word, but that's very close 11:44:12 to the language of the claim.

Q. Which word did I miss?

A. You did not say "both," you said "more." And that's in the context of line 40 of column 25.

Q. Thank you, Dr. Goodrich. 11:44:27

So again, would you agree that the context of this limitation be security policy management server, provides rules to the packet security gateway?

A. I agree. 11:44:55

Q. And would you agree that the server is required to automatically create or alter those rules?

A. I agree.

Q. So in your understanding of this claim 11:45:11

language, do you understand that the creation or alteration of rulesets must be done without human involvement?

A. I'm using the plain and ordinary understanding of automatically created or altered to 11:45:30 a person of ordinary skill in the art based on the specification and understandings of a person of ordinary skill in the art, which in this context, means that the creation or altering is done without human intervention, but configurations that lead to 11:45:50 that could involve human intervention.

Q. Is that last part, configurations that could lead to human intervention, would that be within the scope of the claim language?

A. No. Only configurations that would lead to 11:46:13 automatic creation or altering.

Q. So let's say I have a server, a computer that can generate rulesets automatically, but in the pipeline before those rules are distributed, there is an operator or engineer that has the same built to 11:46:36 tweak or modify the rules. I understand your understanding of the claim language correctly that would be outside the scope of the claim requirements, correct?

MR. PRICE: Objection. 11:46:51

THE WITNESS: That depends on context. I need more details to answer that question.

BY MR. DETRIXHE:

Q. What context would that depend on?

A. What do you mean by tweak and how that would be performed? 11:46:58

Q. Let's say modify a ruleset, a rule within the ruleset.

A. Where would this occur in the pipeline?

Q. After the server generates the rules, but before the rules are distributed to the security gateway? 11:47:13

A. I don't recall this being a question that comes up in my declaration. Is there a place in my declaration where you feel I've addressed this? 11:47:31

Q. Not specifically. I'm just trying to understand your view of the claim language.

A. I would need more time to answer that question. That's not something I believe was required to understand the language of the claims. 11:47:49

Q. So if I understand correctly, you don't prohibit human involvement in modifying the ruleset before it goes out to a customer. So long as the ruleset was initially created by the server without human involvement; is that correct? 11:48:12

MR. PRICE: Objection.

THE WITNESS: I'm still not following, I'm sorry, what you're asking.

BY MR. DETRIXHE:

Q. It's a critical question to understanding when the claim is invalid or not to understand your opinion on whether human involvement is prohibited or not in the generation of the rulesets. 11:48:20

To the extent human involvement is permitted, how much and when? 11:48:46

MR. PRICE: Objection.

THE WITNESS: What is the question then?

BY MR. DETRIXHE:

Q. My question is in your view, does the claim language exclude a human operator from modifying a ruleset created by the server, before it is distributed to the security gateway? 11:49:06

MR. PRICE: Objection, incomplete hypothetical.

THE WITNESS: I'm still not quite following what is in this scenario. If your question is about the "or" language, namely when it says -- let me make sure I get the right patent here, it says: "Wherein one or both of the dynamic security policy or one or more of the packet filtering rules of the dynamic 11:49:30 11:50:04

security policy were automatically created or altered by the security policy management server."

So if your question is what if other things happened to the security policy -- the dynamic security policy or the one or more packet filtering 11:50:26 rules after they were automatically created, my opinion is that if they were automatically created, that would satisfy being automatically created or altered.

BY MR. DETRIXHE: 11:50:45

Q. Even if they were subsequently modified by a person?

A. I don't see that being ruled out here, that namely, it has to be automatically created or altered by the security policy management server and that's 11:50:57 what's required.

Q. I would like to direct your attention to paragraph 92 of Law. It's the first exhibit we looked at.

A. I'm there. 11:51:27

Q. So looking at the last couple sentences, I would like to read them beginning with the sources 315.

A. I see that.

Q. So it states "the sources 315 may create the 11:51:51

threat data 310 by monitoring, defining and analyzing potential and known threats to the security of the process control networks 150. For example, data from the Vulnerability Research Service, (VRS) of Assurent Secure Technologies, the Computer Emergency Response 11:52:17
Team, (CERT) of Carnegie Mellon University, Secunia, end user research and monitoring, and data from Achilles, certified product users (to name but a few of the sources for firewall ruleset data) may be aggregated." 11:52:39

Do you see that?

A. I do.

Q. So would you agree that the sources 315 are sources of ruleset data?

MR. PRICE: Objection. 11:53:00

THE WITNESS: I put this in my declaration for example at paragraph 81 where I state: "Law discloses that the UTMS-configured devices receive threat data 310 directly from sources 315, but does not even contemplate incorporating information 11:53:27
regarding the source 315 to its ruleset updates and distributing the rulesets to a modified rule table," and then I reference this paragraph, paragraph 92: "Disclosing that the UTMS-configured device can collect and aggregate threat data 310 from the Firm 11:53:49

305 or plurality of sources 315 to construct, validate, and verify the various rulesets. Because Law itself does not contemplate modifying rulesets with an indication of a feed and distributing the rulesets to a modified rule table for display, there 11:54:10 stands for reason for why a POSITA would have identified both Law and third party Firm 305 to arrive at a PSG receiving from an SPMS, a dynamic security policy, with rules having an indication of a feed that identifies the source, absent looking to 11:54:32 the '474 Patent itself."

BY MR. DETRIXHE:

Q. Dr. Goodrich, I'm asking a specific question and I would like you to try to answer that question.

So my question is in the part of 11:54:50 paragraph 92 that I read which referred to the data provided by sources 315, that data includes sources for the firewall ruleset data, correct?

A. I disagree.

Q. So that last sentence of this paragraph that 11:55:15 refers to sources for firewall ruleset data, do you see that?

A. I do.

Q. Those sources for firewall ruleset data are sources 315, are they not? 11:55:32

A. They are inclusive of the sources 315.

Q. And so why would it be your opinion that the data provided by sources 315 don't include the firewall ruleset data?

A. I think you've misunderstood what I said. 11:55:48

What I'm saying is that the data that is coming from these sources 315 does not include the indicator of the --

Q. I haven't asked you about indicators yet, Dr. Goodrich. I'm asking you about the sources of 11:56:09

the ruleset data.

A. Oh, then I'm sorry, I didn't understand the question. I thought you were asking about the indicators of the sources.

Q. No. I'm asking -- and I'll just repeat for 11:56:19

clarity, the data provided by sources 315 includes the firewall ruleset data, correct?

A. Sorry, I missed that. I'm not seeing that in Law here in paragraph 92. Where do you see that it includes ruleset data? 11:56:44

Q. I'm reading from the last sentence and I'm quoting "sources for firewall ruleset data."

A. Oh, right. Yes, so I think you're misunderstanding what that is saying. So that's not saying that they are providing the ruleset data, but 11:57:01

namely that they're providing data that then can be incorporated into rules by the Firm 305 -- by the people working at Firm 305.

Q. So that may be one way of interpreting that sentence, but wouldn't it have been obvious to a 11:57:21 person of ordinary skill in the art that it's equally valid that rulesets themselves could be provided in the ruleset data?

A. No, I disagree.

Q. Why would it not be possible for the sources 11:57:37 315 to provide rules in their ruleset data?

A. That's not what's being disclosed here.

Q. I'm asking what would be obvious to a person of ordinary skill in the art?

A. It would not be obvious based on this 11:57:54 disclosure because these are different entities that are distributing their threats in all different kinds of format and it's never disclosed that it's actually then rules and then as we talked about earlier, the rulesets disclosed in Law are very specific about the 11:58:13 types of protected network that it is addressing, such as for nuclear power plants, which these generic sources don't address.

So for that reason additionally it would not be obvious to assume that they include rules of 11:58:36

rulesets.

Q. Not only are you saying that you can't assume that they would include rules. If I understand your opinion correctly, you're saying that a person of skill in the art wouldn't even find it 11:58:49 obvious that ruleset data could include rules; is that right?

A. No, what I'm saying instead is it would not be obvious, based on this disclosure for those third party sources 315 to include rules the way that Law 11:59:04 is defining rules.

THE REPORTER: We've been going almost an hour and a half and I could use a break.

MR. DETRIXHE: We can do a quick ten minute break. 11:59:33

(Recess taken.)

MR. DETRIXHE: Back on the record.

BY MR. DETRIXHE:

Q. Welcome back, Dr. Goodrich.

A. Thank you. 12:08:26

Q. We were just discussing the last two sentences of paragraph 92 of Law and I believe you stated your opinion that a person of ordinary skill in the art would not have found it obvious for the firewall ruleset data provided by the sources 315 to 12:08:42

have included rules, correct?

A. I disagree with the premise of that question. So what we just read from paragraph 92 is that the sources 315 may create the threat data 310 and that there is aggregated threat data 310 that 12:09:28 it's referring to here.

And then your question was asking about ruleset data which is --

Q. In the second sentence there provides to providing firewall ruleset data that we looked at? 12:09:41

A. Right, but again, a person of ordinary skill in the art reading that when it says a few of the sources for firewall ruleset data here, a person of ordinary skill in the art would understand those are sources used for then incorporating things into the 12:10:02 firewall ruleset data, for example, by the Firm 305, but those are not sources of firewall ruleset data.

Q. You would agree that the sources 315 include the examples identified here, vulnerability research service, VRS of Assurent Secure Technologies, the 12:10:37 Computer Emergency Response Team, CERT of Carnegie Mellon and Secunia, correct?

A. Yes, those are examples that are given here as sources 315.

Q. And the sources 315 aren't limited to these 12:10:54

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examples, are they?

A. I would not understand that a person of ordinary skill in the art would limit them to them because it says to name but a few, sources for, again not of, firewall reset data. 12:11:12

Q. Looking at figure 3, the top of figure 315, the numerical 315 -- sorry, the top of figure 3 referencing number 315 is pointing towards 6 circles, correct?

A. That is correct. 12:11:36

Q. So in this figure, there is at least six sources 315, correct?

A. I do not dispute that.

Q. As I understand your position that the data provided by the sources 315 includes only threat 12:12:02 data, but not rules based on the threat data.

Would a person of ordinary skill in the art understand there to be potential overlap in the threat data provided by sources 315?

A. Yes. 12:12:27

Q. In other words, some sources may identify the same threats, correct?

A. Yes, I think that's true.

Q. In fact, I'm looking at multiple sources 315, one would hope and even view it as an indicator 12:12:49

of the reliability of the threat information if multiple sources 315 were to identify the same threat data, correct?

A. I don't know if I would jump to that conclusion, but the disclosure in Law does say that 12:13:08 the threat data can be aggregated by the Firm 305.

Q. So let's say for one piece of threat data I'm going to ask a hypothetical, let's say all six of the sources identified the same threat data and let's say for a different piece of threat data, it was only 12:13:40 identified in one of the six sources.

Do you think a person of skill in the art might find the threat data or the threat identified by the six sources to be a more reliable indicator of a threat than the one identified by only one source? 12:13:58

A. No.

Q. Why is that?

A. Because a threat is a threat. How many people say it as a threat doesn't make it worse or better. 12:14:13

Q. Do you think that the threat data provided by any source is necessarily correct?

A. No, that's why it has to be aggregated and possessed by the Firm 305.

Again to recount how Law teaches that 12:14:46

process and shown in Figure 3, the Firm 305 is aggregating and collecting the data and putting it into a form that then can be shared through the internet with these various devices. So that is all that's going on. 12:15:08

Indeed, it says in paragraph 92 that the Firm 305 can give the threat -- it says: "The UTMS field devices 134 may also be configured to collect and aggregate threat data 310 directly from the firm 305 or plurality of sources 315 to construct, 12:16:02 validate, and verify the various rulesets."

Q. I would like to direct to you Figure 13 of Law.

A. I'm there.

Q. Do you understand that this is a table 12:16:36 providing information about rulesets that may be viewable by an operator?

A. Yes, I agree.

Q. Do you think that the operator would have an interest in knowing which of the sources 315 provided 12:17:04 the threat data that went into forming any particular rule?

A. No.

Q. Why not?

A. Because as I mentioned earlier, a threat is 12:17:24

a threat. It doesn't matter where it's coming from. What matters is whether or not it's a threat and it's already being aggregated from these sources by curators of some kind, such as the Firm 305 that to a person of ordinary skill in the art would 12:17:44 sufficient for it to be something that could be information that would be incorporated into a ruleset.

Q. Earlier, do you recall our discussion on your view that the ruleset data provided by firm 305 12:18:18 was generic ruleset data and not particular to a process control system that received the ruleset data, correct?

A. I recall a discussion, but I don't recall it with the exact language. I was instead referring to 12:18:42 the big picture of Law of how the Firm 305 would be able to provide updates to rulesets that were specific and created by operators in the first place on the devices in their respective networks.

Q. I would like you to assume that one of the 12:19:05 sources 315 was focused specifically on threat data with respect to the type of threats faced by process control networks.

Don't you think that a person of ordinary skill in the art would have an interest in knowing if 12:19:31

a particular threat was generated by the source that was focused on generating threats for process control networks?

A. No, I disagree.

Q. Why not? 12:19:53

A. Because as I said earlier, a threat is a threat, and saying certain threats are somehow more important implies that other threats are less important and I don't believe that that is what is being taught in Law. I believe Law is teaching that 12:20:05 all threats are equally risky, especially when we have this type of control data for sensitive devices such as nuclear power plants, hence discounting threat data simply because it would not have come from this hypothetical source of control center 12:20:23 monitoring would not follow. All threats would be equal in the eyes of an operator.

MR. DETRIXHE: Okay. That concludes my questions, Dr. Goodrich. Thank you for your time.

MR. PRICE: I have a very short redirect 12:21:03 before we conclude today.

EXAMINATION

BY MR. PRICE:

Q. Good afternoon, Dr. Goodrich. 12:21:14

A. Good afternoon.

Q. Do you recall a discussion with counsel earlier where the term "sub network" was used to refer to process control networks 150a and 150b disclosed in Law? 12:21:28

A. Yes.

Q. Does Law ever refer to networks 150a or 150b as sub networks?

A. No. Fortunately I have an electronic version of Law that was provided as Exhibit 1 for 12:21:48 this deposition. That word "sub network" does not appear in Law.

MR. PRICE: I have no further questions.

MR. DETRIXHE: No recross for me.

THE REPORTER: Would either of you like a rough?

MR. DETRIXHE: Rough and expedited copy.

MR. PRICE: We don't need a rough or expedited copy.

THE REPORTER: But do you need a copy?

MR. PRICE: We will take a copy.

(The deposition was concluded at 12:20 p.m.)

DECLARATION

I hereby declare I am the deponent in the within matter; that I have read the foregoing deposition and know the contents thereof, and I declare that the same is true of my knowledge except as to the matters which are therein stated upon my information or belief, and as to those matters, I believe it to be true.

I declare under the penalties of perjury of the state of California that the foregoing is true and correct.

executed on the _____ day of _____ 2024, at _____, California.

_____

W I T N E S S

I, GINA M. CLOUD, a certified shorthand reporter for the State of California, do hereby certify:

that prior to being examined, the witness named in the foregoing deposition, was by me duly sworn to testify the truth, the whole truth, and nothing but the truth pursuant to Section No. 2093 of the Code of Civil Procedure;

That said deposition was taken before me pursuant to notice, at the time and place therein set forth, and was taken down by me in shorthand and thereafter reduced to typewriting via computer-aided transcription under my direction;

I further certify that I am neither counsel for, nor related to, any party to said action, nor in anywise interested in the outcome thereof.

IN WITNESS WHEREOF, I have hereunto subscribed my name this 18th day of January, 2024.

Gina Cloud

GINA M. CLOUD, CSR No. 6315

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